Job Title:	Systems Analyst/Programmer II	**Job Grade Level:**	10

Career Track: Second in a I, II Series

Job EEO Code:

Agency/Department: Office of the Revisor of Statutes

Date: 6/20/2005
(updated 10/24/2006)
(updated 9/14/2014)

Reporting to: Deputy Revisor for Information Systems. Functional reporting to Data Systems Project Manager

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Primary Objective: Systems Analyst/Programmer II provides complex computer software programming and/or systems administration work necessary to develop, operate and maintain the Revisor's Office computer systems.

Responsibilities & Tasks:

The Systems Analyst/Programmer II performs complex software programming; or systems administration; or database administration functions. Each individual in this job classification, however, has a primary focus in one or the other of these broad areas.

1. Provide complex programming for computer applications used in the Revisor's Office or other legislative offices. Train System Analyst/Programmer I staff to perform these duties. Duties include:
   a. Design, program, test and document new functions and features for in-house developed applications. This includes key work in the development of new XTEND software applications. Necessary components of this work include subsystem design, algorithm design, and application programming.
   b. Enhance existing functions and features for in-house developed applications needed for better efficiency and more flexibility. This may include XTEND applications already in prototype, web applications, or applications designed in Oracle. In addition, the maintenance and enhancement of databases for the Revisor's Office, the House of Representatives and the Senate are included.
   c. Modify and enhance usage of software purchased for special applications.
   d. Evaluate and correct problems that arise in the use of any of the types of applications in a to c.

2. Provide one or more systems administration functions. Train System Analyst/Programmer I staff to perform these functions. Functions include:
   a. All system administration functions include the following duties:
      i. continuous training in relevant technologies
      ii. planning for the needs of the office, researching hardware and software requirements, and making purchase recommendations to the Deputy Revisor for Information Systems
      iii. installation of both hardware and software to provide for system operation
      iv. ongoing maintenance, configuration, administration, trouble-shooting, and technical support of systems.
   b. Microsoft Windows systems administration.

    c. Security firewall administration, including related functions such as the router, shared services (DMZ), and virtual private network concentrator.
    d. Network administration.
    e. Linux system administration.
    f. Storage Area Network (SAN) administration.
    g. Perform Linux system administration.
    h. Web server administration, to enable reliable operation of the office's web site and Internet services.

3. Database administration functions covering the complete life cycle of relational databased.
    a. Database design
        i.   Communicate with software programmers in the legislature. Collect and document requirements for new database tables and changes to existing tables.
        ii.   Design and document database: tables, views, and stored procedures. Use established best practices and vendor recommendations to design databases that perform well and are easy to maintain.
        iii.   Write SQL to create and modify tables, views, and stored procedures. Use a revision control system to preserve the SQL.
    b. Database administration
        i.   Perform all maintenance operations. The database should be both high availability and high performance.
        ii.   Monitor database performance. Tune database configuration as necessary. Work with legislative programmers to fix software that degrades database performance by requesting unnecessary database operations.
        iii.   Protect database contents. Monitor the database for malicious attacks and/or unauthorized access. Report such incidents to the Deputy Revisor for IS. Work with state security experts to resolve and prevent such incidents.
        iv.   Preserve database contents. Implement and monitor procedures for preserving the database's contents.
        v.   Continuously learn about the capabilities and limitations of the commercial database in use. Install the latest stable version of the commercial database.
    c. Database programming assignments
        i.   Full-text searching of documents stored in the database.
        ii.   Design and code SQL statements for use by other programmers.
        iii.   Perform batch import, export, and conversion of data.

4. Assist with project administration, as requested by the Deputy Revisor for Information Systems or the Data Systems Project Manager.

5. Advise the Deputy Revisor for Information Systems or the Data Systems Project Manager by:
    a. suggesting new network features that would increase the value of the Revisor's data to the public and the legislative user community, including Internet access, and
    b. recommending hardware or software purchases, and
    c. serving as a mentor to individuals in the Systems Analyst/Programmer I classification, and
    d. assisting in the evaluation of applicants for computer staff positions at the request of the Deputy Revisor for Information Systems.

6. Serve other legislative offices and the public by:

a. working with House, Senate and other legislative offices to incorporate network applications using legislative data in the Revisor's system database
b. work with staff from other legislative offices to plan and implement their computer needs related to the network or revisor system in general
c. answering questions relating to the use of the network or Revisor's systems in general

7. Perform other duties as assigned

Budget Responsibility:

1. None, other than to recommend hardware or software purchases to the Deputy Revisor for Information Systems

Supervisor Responsibility:

1. None, other than to assist in hiring processes at the request of the Deputy Revisor for Information Systems

Indirect Supervision:

1. Trainer and Help Desk Specialist I and II in regard to specialized applications
2. Systems Analyst/Programmer I as mentor

Scope of Relationships:

1. External contacts:
   a. Daily to weekly contact with information services staff in other legislative offices, depending on specific assignment
   b. Monthly contact with technical support engineers to resolve issues in commercial software applications
   c. Quarterly contact with vendors or other sales persons
2. Internal contacts:
   a. Daily contact with independent contractors hired to maintain existing IT systems
   b. Daily contact with other Revisor's Office computer staff
   c. Weekly contact with other Revisor's Office staff such as deck, attorney or administrative staff

Decision Making & Impact of Error:

1. Discretion. The Systems Analyst/Programmer II typically receives a broad-based assignment or project from the Deputy Revisor for Information Systems
   a. Primary decision making:
      i. on how to develop and implement the specific project or assignment (application programming, software documentation and project administration)
   b. Shared decision making:
      i. on how the specific project or assignment fits within the framework of broader computer systems (subsystem design and algorithm design)
      ii. on any recommended hardware or software purchases
      iii. on any hiring recommendations

2. Impact of Error.
   a. Errors in programming could result in the failure of an application, loss of data, or delay in the ability to produce data
   b. Errors in system administration could take down all or part of the system, cause loss of data or deny access to sensitive information

Working Conditions/Physical Demands:

1. Normal office conditions, approximately 90% of the time
2. Occasional lifting of heavy computer equipment, approximately 5% of the time
3. Occasional long hours to solve computer problems or be on-site for trouble-shooting, approximately 5% of the time
4. During session, rotate on-call duty with other computer staff, for a one week time period

Minimum Qualifications:

1. Education. The minimum education required is a four-year computer science degree, or the equivalent, based upon at least three years of work in the computer field
2. Experience. Three years work experience at the Systems Analyst/Programmer I level is necessary in addition to any experience needed to substitute for the education requirement
3. Knowledge. Depending on the position, *extensive knowledge* in one or more of the following is required:
   a. Java and Java EE; or PHP, and CSS, and JQuery, programming languages
   b. Microsoft Windows servers and a Windows scripting language (e.g. Perl, PowerShell).
   c. Linux servers and Linux scripting languages (e.g., Perl, bash)
   d. Hypervisor software for creating and running virtual servers
   e. Office productivity software such as Microsoft Office applications
   f. Internet concepts and usage such as html, http, telnet, ftp and e-mail

4. Skills/Abilities. This position requires:
   a. Analytical skills to diagnose problems, design corrections or new applications
   b. Resourcefulness to solve a particular computer problem in a manner that will not adversely affect the other system components
   c. Initiative to develop new applications and enhance existing applications
   d. Judgment to determine the best way to solve a problem or design a new application
   e. Communication/relationship skills to be effective in communicating new applications or solving problems

Desired Qualifications:

1. Knowledge of the legislative process and users' jobs
2. Advanced knowledge in any of the applicable programming or system administration functions

All identified duties are essential.

(Distribution of copies – employee, supervisor and Human Resources).